

## PATENT ABSTRACTS OF JAPAN

Publication number : 11-253225  
Date of publication of application : 21.09.1999

Int.Cl. A45D 24/22

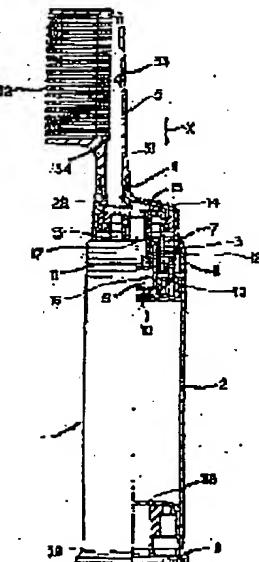
Application number.: 10-083025 Inventor: TSUNODA YOSHIOUKI  
Date of filing : 13.03.1998 HARA TORU

## HAIR DYEING TOOL

### Abstract:

**PROBLEM TO BE SOLVED:** To reinject and reuse a hair dye and easily wash a container cylinder, a delivery pump and the inside of hair dyeing comb body by detachably disposing the delivery pump at one end of the container cylinder and attaching an end plate to the other end of the container cylinder and slidably fitting a slide piston into the container cylinder.

**SOLUTION:** A delivery pump 3 is detachably fitted to the upper end of a container cylinder 2 for a hair dye and a hair dyeing comb body 5 is attached to a delivery pump 3, at the undercut part 4. An end plate 6 is fitted to the lower end of the container cylinder 2. A cylinder chamber 9 is integrally formed with an external cylinder 8 screwed to the container cylinder 2 with a screw 40, in the delivery pump 3, and a check valve 10 is disposed at the bottom of the cylinder chamber 9. A main piston 11 and a subpiston 12 are incorporated in the cylinder chamber 9 to form the main piston 11 at the lower end of a sliding cylinder 13 which is fixed to a sliding cylinder 15. The subpiston 12 is provided with a skirt closely stuck on the inner peripheral wall 16 of the cylinder chamber 9 and the inner peripheral face of the lower end of the sliding cylinder 15, and arranged at the upper part of the main piston 11 so as to be vertically slidable. Number 38 designates a sliding piston which is adapted to move upward due to negative pressure in container cylinder 2.



(19)日本国特許庁 (JP)

(12) 公開特許公報 (A)

(11)特許出願公開番号

特開平11-253225

(43)公開日 平成11年(1999)9月21日

(51)Int.Cl.  
A 45 D 24/22

識別記号

F 1  
A 45 D 24/22

B  
D

審査請求 未認定 請求項の数4 FD (全6頁)

(21)出願番号 特願平10-83025

(22)出願日 平成10年(1998)3月13日

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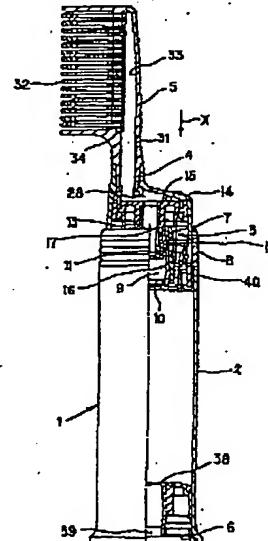
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(54)【発明の名称】 染髪具

(57)【要約】

【課題】 染髪液剤の充填、該液剤流路の洗浄、内容液剤の減少に伴い大気圧で移動する摺動ピストンの位置調整等を行いうる染髪具を提供すること。

【解決手段】 染髪液剤の収納筒に、吐出ポンプと染髪くし体との結合アセンブリを着脱自在に組み付け、かつ前記収納筒の下端に嵌着した端板に中央開孔を設け、収納筒内の摺動ピストンの内腔に前記中央開孔を対峙させた。



で調合し、希望する色調に染髪することも、染髪具の洗浄、再使用が可能な個人で好みの色調の染髪を容易に行いうる効果を奏する。

【0040】染髪液剤を収納する収納筒内の、液剤の減量に応じて大気圧に押されて移動する摺動ピストンの位置を端板の中央開孔を利用して容易に行いうるので、注入し、充填する染髪液剤が収納筒の内容量より少量の場合の吐出ポンプの空打ち数を減少させる効果も有する。

【0041】請求項2の発明では、染髪くし体の液剤流入口と、吐出ポンプの液剤吐出口とが、吐出ポンプ軸心方向の垂直投影で重ならない位置に配置され、連通液路で連通させられているので、吐出ポンプの吐出圧が直接染髪くし体の液路33から吐出口37へ作用し、吐出量が脈動的に変化する挙動を、連通液路28内で緩和させることができる効果を奏する。

【0042】また染髪くし体の液剤流入口が吐出ポンプ軸心に対し、半径方向外側へ偏倚させることができ、従って、染髪くし体を染髪液剤の収納筒の1側に近い位置で、直立した姿勢で配設できることで、染髪くし体のくし全体を使って満遍なく染髪させることができる効果を奏し、染髪くし体が前記収納筒の1側に対し、傾斜して配設されている場合の、染髪くし体の基部寄りのくしの染髪不良を防止できる効果を奏する。

【0043】請求項3の発明では、個々のくしの横幅Wと厚さTとの比率が1:0.2~0.3程度とされ、かつ隣接するくしの中心間距離が厚さTの1.5~2倍程度とされているので、合成樹脂による成形手段によって染髪くし体が成形されるにも拘らず、十分なすきぐし機能を発現できるすきぐし構造を実現でき、横幅Wと厚さTとの比率が前記下限以下であり、隣接するくしの中心間距離が前記下限以下となると、すきぐし機能を持つ染髪くし体の成形が困難となるし、前記各数値の上限以上となるとくしが大型となり、すきぐし機能を発現できなくなる。

なお、個々のくしの横幅、厚さ、中心間距離は、すきぐ\*

\* し機能の発現と、合成樹脂成形可能な範囲との相関関係において適宜選択される。

【0044】また請求項4の発明では、請求項2および請求項3の両発明との関連で、染髪くし体に列設されている個々のくしの互いに対向している側面の先端部寄り部分に、染髪液剤の吐出口が開口されているのでくしけずった際に、染髪液剤を頭皮に近い毛髪に付着させることができ、頭髪を梳きやすく、しかも比較的狭い間隔でくしが頭髪間を通過することとなり、染髪液剤を満遍なく頭髪に付着させるための染髪具の操作回数を減少させ、染髪効率を向上させうる効果を奏する。

【図面の簡単な説明】

【図1】 実施の一例の一部を断面として示した側面図である。

【図2】 図1に示すものの要部の拡大断面図である。

【図3】 主幹部に植設されるくし群のみの、図2における矢印正面図である。

【図4】 図3中A-A線断面拡大図である。

【図5】 図3中B-B線断面拡大図である。

【符号の説明】

1 染髪具

2 収納筒

3 吐出ポンプ

5 染髪くし体

6 端板

27 液剤吐出口

28 連通液路

32 くし

33, 36 液路

35 先端部

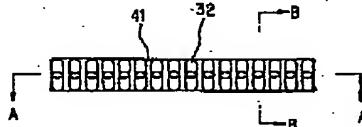
37 吐出口

41 液剤流入口

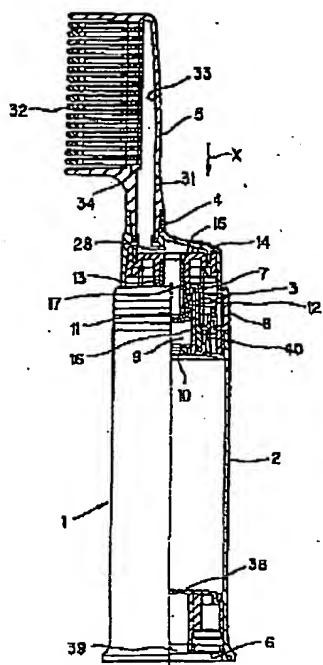
T くしの厚さ

W くしの横幅

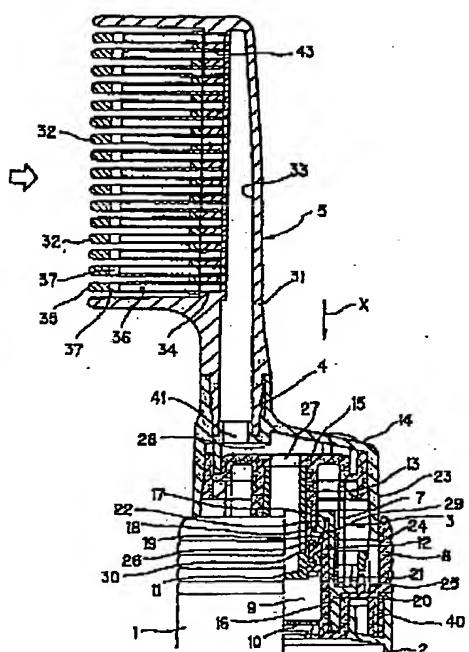
【図3】



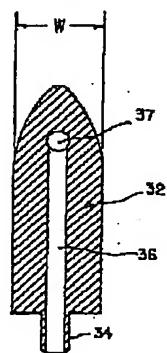
— [图 1 ]



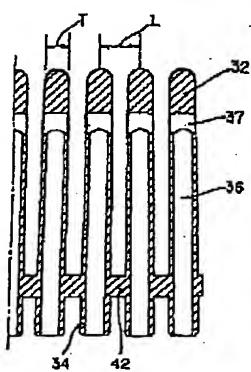
[図2]



[图5]



〔図4〕



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**CLAIMS**

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**[Claim(s)]**

[Claim 1]A discharge pump with which a hair dying comb object which has a discharged liquid way of hair dying liquids and solutions at the end of an accommodation cylinder of hair dying liquids and solutions was attached is allocated enabling free attachment and detachment, A hair dying implement which the other end of an accommodation cylinder of hair dying liquids and solutions is stopped with an end plate which has central puncturing, and is fitted in into said accommodation cylinder enabling free sliding of a slide piston which made a lumen open for free passage to said end plate side.

[Claim 2]The hair dying implement according to claim 1 which liquids-and-solutions input of a discharged liquid way of a hair dying comb object and a liquids-and-solutions delivery of a discharge pump are arranged in vertical projection of a discharge pump axial center direction at a position not lapping, and are made to open for free passage in a free passage liquid route.

[Claim 3]A center-to-center dimension of a comb which a ratio of the breadth W of each comb and thickness T adjoins 1:0.2 to about 0.3 in a hair dying comb object is the about 1.5 to 2 times [ of thickness T ] hair dying implement according to claim 1 or 2 which carries out liking \*\* and is made into structure.

[Claim 4]Claim 1 which is having a delivery which each comb currently installed successively by hair dying comb object opened for free passage into a tip part slippage portion of the side which has countered mutually in a liquid route of hair dying liquids and solutions from a discharge pump established, the hair dying implement according to claim 2 or 3.

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[Translation done.]

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**DETAILED DESCRIPTION**

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**[Detailed Description of the Invention]****[0001]**

[Field of the Invention] It is \*\*\*\*\*, breathing out hair dying liquids and solutions in this invention, from the hair dying comb object which stores the hair dying liquids and solutions of the color tone of choice in the accommodation cylinder, and was attached to this accommodation cylinder, in order to dye the hair the color tone of choice.

Therefore, it is related with improvement of a hair dying implement which carries out hair dying.

**[0002]**

[Description of the Prior Art] As a hair dying implement dyed the color tone of choice, simply the hair at a house, It is attached and fixed to the end of the accommodation cylinder in which hair dying liquids and solutions were stored by the discharge pump of these liquids and solutions, and as shown also in JP,6-46604,U in the delivery of this discharge pump. The hair dying comb object in which the discharge opening of hair dying liquids and solutions is established is attached to each comb, and in the lower end of said accommodation cylinder. The hair dying implement with which the inner package of the slide piston which operates automatically to the discharge pump side in an operation of atmospheric pressure was carried out with reduction of hair dying liquids and solutions, As shown in JP,9-28446,A, it attaches so that a hair dying comb object can be detached and attached at the container end which can be pressed with fingers, and the bellows shape container of a different body is attached to the removed hair dying comb object, and the hair dying implement which washed this comb object is known.

[0003] Attachment and detachment with a hair dying comb object and the accommodation cylinder of hair dying liquids and solutions and a supplement of hair dying liquids and solutions, washing inside a hair dying implement, etc. are difficult for what is shown in said JP,6-46604,U, and also. Pumping pressure acts on the delivery of a direct comb object, or there are

problems, like the arranging position of a hair dying comb object has restriction, and what is shown in JP,9-28446,A has the problem of needing a separate member slack bellows shape container for washing of a hair dying comb object.

[0004]

[Problem(s) to be Solved by the Invention]In view of the problem which the above-mentioned conventional hair dying implement has, this invention the hair dying liquids and solutions of a color tone prepared according to liking of regrouting of hair dying liquids and solutions after exhausting the hair dying liquids and solutions in an accommodation cylinder, a reuse, and an individual, Only an initial complement can be poured in and filled up into an accommodation cylinder, and the inside of an accommodation cylinder and a discharge pump, and a hair dying comb object can also be washed easily, and it is making into the technical problem to provide the hair dying implement with which \*\*\*\* and the application of hair dying liquids and solutions which becomes empty can moreover also perform the hair easily and certainly on the average.

[0005]

[Means for Solving the Problem]In order to solve said technical problem, in an invention of claim 1. A discharge pump with which a hair dying comb object which has a discharged liquid way of hair dying liquids and solutions at the end of an accommodation cylinder of hair dying liquids and solutions was attached is allocated enabling free attachment and detachment, An end plate which has central puncturing in the other end of an accommodation cylinder of these hair dying liquids and solutions was attached, and it was considered as a hair dying implement of composition of having fitted in a slide piston which made a lumen opening for free passage at said end plate side enabling free sliding, into said accommodation cylinder.

[0006]Since it is said composition, when hair dying liquids and solutions in an accommodation cylinder are exhausted, by invention of claim 1, After removing from an accommodation cylinder by having made a discharge pump and a hair dying comb object into one, depressing a slide piston in an accommodation cylinder to the end plate side which has central puncturing by a rod etc. and pouring in water or a penetrant remover, Since water or a penetrant remover will flow out of a hair dying comb object through a discharge pump if a discharge pump with which a pump and a hair dying comb object were attached again, a discharge pump was operated or a hair dying comb object was attached is operated in water or a penetrant remover, these insides of many members are washed. Of course, an accommodation cylinder can wash independently.

[0007]After washing, after making it rinse and dry, again, make a discharge pump and a hair dying comb object into one, and they are removed from an accommodation cylinder, A slide piston in an accommodation cylinder is depressed to the end plate side by a rod etc. from an opening which removed a discharge pump etc., and if only quantity to use hair dying liquids

and solutions of use and a thing of the same kind last time is poured in and a discharge pump and a hair dying comb object are attached, a reuse can be carried out promptly last time similarly.

[0008]When two or more hair dying liquids and solutions of a unique tone are mixed and hair dying liquids and solutions of a color tone of choice are prepared, From capacity of an accommodation cylinder, what is necessary is just to pour in into an accommodation cylinder which washed prepared this hair dying liquids and solutions, and the amount of infusion comes out in small quantities, and at a certain time. Hair dying can be carried out using unique hair dying liquids and solutions by inserting a bar etc. from central puncturing of an end plate, pushing up a piston, pouring in, after making capacity of an accommodation cylinder equal to a prepared solution dose, and attaching a discharge pump and a hair dying comb object. That is, according to this invention, by a reuse of a single hair dying implement, hair dying by hair dying liquids and solutions with which many color tones differ can also be performed, and it decreases, the \*\*\*\*\*, i.e., number of pumping, of a discharge pump in case the amount of infusion is little, and gets. An aggressiveness raising of said piston is not performed, but after pouring of hair dying liquids and solutions, \*\*\*\*\*, i.e., pumping, can be repeated and a piston can also be raised.

[0009]In an invention of claim 2, since liquids-and-solutions input of a hair dying comb object and a liquids-and-solutions delivery of a discharge pump are made open for free passage in a position which does not lap in vertical projection in a free passage liquid route, different [ of a discharge pressure of a discharge pump ] is buffered in a free passage liquid route, and discharge quantity of hair dying liquids and solutions from a hair dying comb object is equated in general.

[0010]When liquids-and-solutions input and a liquids-and-solutions delivery do not lap in vertical projection, a hair dying comb object can be arranged in a position close to accommodation cylinder lateral surface, it also becomes possible to arrange in the direction which is parallel to an accommodation cylinder axis, and it becomes easy [ hair dying with all combs of a hair dying comb object ].

[0011] Since 1.5 to 2 time intensity of thickness T carries out liking \*\* and a center-to-center dimension of a comb which a ratio of the breadth W of each comb and thickness T adjoins 1:0.2 to about 0.3 in a hair dying comb object is made into structure in an invention of claim 3, Shaping by a synthetic resin is easy, and moreover can reveal sufficient hair liking effect, and the hair dying of it can be carried out good.

[0012]In an invention of claim 4, since a delivery which was open for free passage to a channel of hair dying liquids and solutions sent to a side tip slippage part which has countered mutually [ of each comb currently installed successively by hair dying comb object ] from a discharge pump was established, it became a hair dying implement which is easy to carry out hair dying.

[0013]

[Embodiment of the Invention]Drawing 1 is the important section of one mode which combined and carried out each invention of claim 1, claim 2, claim 3, and claim 4 the side view shown as a section, and the hair dying implement 1, The discharge pump 3 attached to the upper bed by the thread part 40 in the end of the accommodation cylinder 2 of hair dying liquids and solutions, and the accommodation cylinder 2, and the example of a graphic display enabling free attachment and detachment, It comprises the hair dying comb object 5 attached to the discharge pump 3 by the undercut part 4, and the end plate 6 attached in the lower end in the other end of the accommodation cylinder 2, and the example of a graphic display, and is considered as the product made of a synthetic resin except coil-spring 7 mentioned later.

[0014]The cylinder room 9 is formed in the outer case 8 and one by which the discharge pump 3 is screwed on the accommodation cylinder 2 by the thread part 40, and the check valve 10 opened only into the cylinder room 9 is formed in the pars basilaris ossis occipitalis of the cylinder room 9.

[0015]In the cylinder room 9, the main piston 11 and the sub piston 12 are incorporated, the main piston 11 is formed in the lower end of the sliding pipe 13, and the sliding pipe 13 is being fixed to the sliding pipe 15 fixed in the operating section 14.

[0016]As shown in enlarged drawing slack drawing 2, the sub piston 12 is allocated in the upper part of the main piston 11, enabling free up-and-down sliding so that the skirt parts 18 and 19 of two inside and outside close to the inner circle wall 16 of the cylinder room 9 and the lower end inner skin 17 of the sliding pipe 15 may be had and mentioned later.

[0017]Between the outer case 8 of the discharge pump 3, and the cylinder room 9, The spring receiver 20 is attached, the upper bed of the paries medialis orbitae 21 is made into the stopper ring 22 attached in the upper inner circumference side of the inner circle wall 16 of the cylinder room 9, and the approach end of the sub piston 12 is specified in contact with the upper bed of the skirt part 19 of the outside of said sub piston 12.

[0018]If said coil spring 7 is arranged, the operating section 14 is always held to the approach end and the operating section 14 is depressed with a fingertip between the spring receiver 20 and the undersurface of the sliding pipe 15, The operating section 14 descends until the lower end 24 of the outer tube section 23 contacts the inner step 25 of the outer case 8, making the coil spring 7 compress. This position serves as a stroke end of the main piston 11, and the position which the operating section 14 is pushed up with said coil spring 7, and you were made to orientate with the stopper of a graphic display abbreviation serves as an approach end of the main piston 11.

[0019]The opening 26 is formed in the peripheral wall of said sliding pipe 13, the upper bed of this sliding pipe 13 is made into the liquids-and-solutions delivery 27, and the opening is carried out to the free passage liquid route 28 of the operating section 14.

[0020]The lower end 29 of the above-mentioned sliding pipe 15 is located up from the main piston 11 of the lower end of the sliding pipe 13, and this lower end 29 is located in it right above the bond part 30 of the skirt parts 18 and 19 of two inside and outside of the sub piston 12 so that it may be clearly shown by drawing 2.

[0021]The hair dying comb object 5 attached to the operating section 14 by the undercut part 4 comprises the chief editor part 31 and the comb 32 of a large number implanted in the chief editor part 31, and the liquid route 33 formed covering the overall length of the chief editor part 31 is opened for free passage by the free passage liquid route 28 of the operating section 4 in the liquids-and-solutions input 41 of the lower end.

[0022]The liquids-and-solutions input 41 of the lower end of said liquid route 33 and the liquids-and-solutions delivery 27 of the upper bed of the sliding pipe 13 are arranged in the vertical projection of the axial center direction of the discharge pump 3 at the position which does not lap so that it may be clearly shown by drawing 2. For this reason, the liquids and solutions breathed out from the liquids-and-solutions delivery 27, Since it flows to the liquids-and-solutions input 41 and flows into it after being breathed out in the free passage liquid route 28, the discharge pressure of the discharge pump 3 can ease the pulsation action of the liquids and solutions which carry out a direct action to the liquid route 33 of the hair dying comb object 5, and are breathed out from the delivery 37 of the comb 32 mentioned later.

[0023]In two or more combs and the example of a graphic display, 16 sheets go away, 32 is made to follow a series by the connecting part 42 of a right above [ the base 34 ] position, as shown in drawing 3, drawing 4, and drawing 5, it is considered as a thin cylindrical shape, and is inserted and fixed to the implantation hole 43 of the chief editor part 31 of the hair dying comb object 5, and said base 34 is in said comb 32.

[0024]The liquid route 36 is formed [ to / from the base 34 / near the tip part 35 ], the tip of the liquid route 36 is open for free passage to the delivery 37 which carries out an opening to the side in which the comb 32 which adjoins in a tip part 35 slippage portion has countered mutually, and each comb 32 is made to open the liquid route 36 for free passage by the liquid route 33.

[0025]Although it goes away hair dying comb object 5, 32 is made into what is called structure that carries out liking \*\* and may produce an operation and the center-to-center dimension of the comb 32 which thickness T which the breadth W shown in drawing 5 shows to 7.1 mm and drawing 4 adjoins 2 mm is set as 3.5 mm in the graphic display example, As conditions for the product made of a synthetic resin carrying out liking \*\*\*\*\*, and carrying out liking \*\* and exhibiting a function, It carries out liking \*\* that the range of the ratio of said breadth W and thickness T is 1:0.2-0.3, it is preferred as a structure, it becomes difficult to fabricate said ratio or less at 1:0.2, and the function which the comb 32 is thick, becomes large-sized, and carries out liking \*\*\*\*\* is lost or more in 1:0.3. About 1.5 to 2 times of thickness T carry out liking \*\* of

the center-to-center dimension of the adjoining comb 32, it is preferred as a structure, in 1.5 or less times, shaping becomes difficult, liking \*\* is carried out, and a function is lost at more than twice. [ of times ]

[0026]The slide piston 38 is attached in the accommodation cylinder 2, and the pars basilaris ossis occipitalis of the accommodation cylinder 2 is formed, and it is attached in the lower end of the accommodation cylinder 2 with the end plate 6 which has the central puncturing 39.

[0027]Where specified quantity restoration of the hair dying liquids and solutions of a predetermined color tone is carried out in the accommodation cylinder 2, when a user depresses the operating section 14 with a fingertip over a user, the hair dying implement 1 concerning this invention, operating the discharge pump 3 and making hair dying liquids and solutions breathe out from the delivery 37 of the comb 32 -- the hair -- \*\*\*\*\* -- hair dying is carried out by things.

[0028]Since the sub piston 12 is not combined with other members although the sliding pipe 15 and the sliding pipe 13 descend if it is depressed as the operating section 14 shows by the arrow X, It stops at an original position, and separates with the main piston 11, and the cylinder room 9 is open for free passage via the opening 26 of the sliding pipe 13 to the lumen of this pipe 13, and the free passage liquid route 28 of the operating section 14.

[0029]Since the fluid pressure in the cylinder room 9 goes up by descent of the sliding pipe 13 into the cylinder room 9, the check valve 10 serves as close and the hair dying liquids and solutions in the cylinder room 9 flow into the free passage liquid route 28 through the liquids-and-solutions delivery 27 from said opening 26. If descent with the sliding pipes 13 and 15 advances, the lower end 29 of the sliding pipe 15 will contact the bond part 30 of the sub piston 12, the sub piston 12 will also descend from this time, the fluid pressure in the cylinder room 9 will continue going up, and the inflow to the free passage liquid route 28 of hair dying liquids and solutions will be continued.

[0030]The hair dying liquids and solutions which flowed into the free passage liquid route 28 flow into the liquid route 36 of the comb 32 through the liquids-and-solutions input 41 and the liquid route 33 of the chief editor part 31 of the hair dying comb object 5, are breathed out from the delivery 37, and hair dying is presented with them.

[0031]If the press to the operating section 14 is solved, the operating section 14 is raised with the restoration elasticity of the coil spring 7, the sliding pipes 13 and 15 also go up, the inside of the cylinder room 9 will be made into negative pressure, the check valve 10 will open, and the hair dying liquids and solutions in the accommodation cylinder 2 will be sucked up by rise of the main piston 11 into the cylinder room 9. Since the lower end part 29 estranges from the sub piston 12 by rise of the sliding pipe 15, From the time of the main piston 11 contacting the lower part of the sub piston 12, the sub piston 12 is also followed on the main piston 11, and goes up, When sucking of the hair dying liquids and solutions into the cylinder room 9

continues and the main piston 11 reaches an approach end by the power of the coil spring 7, the cylinder room 9 is sealed and the regurgitation of the hair dying liquids and solutions shown in drawing 1 is equipped with it.

[0032] Since the inside of the accommodation cylinder 2 is decompressed whenever sucking of the hair dying liquids and solutions into the cylinder room 9 is performed, the slide piston 38 slides to the discharge pump 3 side by operation of the atmospheric pressure which acts through the central puncturing 39 of the end plate 6, and maintains the fluid pressure in the accommodation cylinder 2 isotonic with atmospheric pressure.

[0033] When the inside of the accommodation cylinder 2 becomes empty by repetition of hair dying, return the thread part 40 and The discharge pump 3, Remove the hair dying comb object 5, insert a rod from the opening of the upper part of the formed accommodation cylinder 2, and the slide piston 38 is depressed to the bottom of the accommodation cylinder 2, The whole channel of the discharge pump 3 and the hair dying liquids and solutions within the hair dying comb object 5 is washed in the accommodation cylinder 2 by pouring in water or a proper penetrant remover into the accommodation cylinder 2, screwing again on the discharge pump 3 and the hair dying comb object 5 which were removed, and repeating the operation of the operating section 14.

[0034] This washing immerses the combination object of the discharge pump 3 and the hair dying comb object 5 in the container put into water or a penetrant remover, and can attain it operating the operating section 14 and by immersing and swinging the accommodation cylinder 2 in this container.

[0035] When washing of the accommodation cylinder 2, the discharge pump 3, and the hair dying comb object 5 and desiccation are completed, If depress the slide piston 38 to the bottom of the accommodation cylinder 2 again, and spare hair dying liquids and solutions are poured in into the accommodation cylinder 2, both liquids and solutions are mixed in a 2 liquid type case, it is poured in and the discharge pump 3 and the hair dying comb object 5 are screwed on like origin, a hair dying implement will be in the state where it can be again used like before.

[0036] When there is less quantity of the above-mentioned hair dying liquids and solutions to pour in than the inner capacity of the accommodation cylinder 2, [ whether after inserting a rod etc. from the central puncturing 39 of the end plate 6 and pushing up the slide piston 38 to a position suitably, hair dying liquids and solutions are poured in, and ] After pouring in a small quantity of hair dying liquids and solutions, may perform the aggressiveness raising of said slide piston 38 before screwing of discharge pump 3 grade, and, After screwing the discharge pump 3 on, a rod-like structure may be inserted from the central puncturing 39 of the end plate 6 in the state which has depressed the operating section 14, the slide piston 38 may be pushed up, and it may carry out by, of course repeating, repetition slack \*\*\*\*\*\*, i.e., pumping, of

an operation of the operating section 14.

[0037]Also when two or more sorts of hair dying liquids and solutions with which color tones differ are prepared and the hair dying liquids and solutions of the color tone of choice are made, the hair dying implement with which it filled up with preparation hair dying liquids and solutions is easily obtained by said regrouting and identity operation.

[0038]

[Effect of the Invention] After exhausting hair dying liquids and solutions according to the invention of claim 1, By removing united discharge pump and hair dying comb object from the accommodation cylinder of hair dying liquids and solutions, Perform washing etc. of the hair dying liquid flow channel of the accommodation cylinder by pouring of the reuse re-filled up with spare hair dying liquids and solutions, water, or a penetrant remover, and discharge pump operation, a discharge pump, and a hair dying comb object, or. Since it can wash by a discharge pump and a hair dying comb object operating [ the bottom ] an operating section in water or the container of a penetrant remover the aforementioned picking outside, and swinging an accommodation cylinder in this container, there is an effect which can make repeated use of a hair dying implement possible.

[0039]Since washing of a hair dying implement and a reuse are possible also for preparing by oneself two or more sorts of hair dying liquids and solutions with which color tones differ, and carrying out hair dying to the color tone for which it wishes, the effect that hair dying of a favorite color tone can be easily performed in an individual is done so.

[0040]Since the position of the slide piston which is pushed on atmospheric pressure according to the loss in quantity of liquids and solutions in the accommodation cylinder which stores hair dying liquids and solutions, and moves can be easily performed using central puncturing of an end plate, it also has the effect that the hair dying liquids and solutions with which it is poured in and filled up decrease the number of \*\*\*\*\* of the discharge pump in a little, and get from the inner capacity of an accommodation cylinder.

[0041]Since the liquids-and-solutions input of a hair dying comb object and the liquids-and-solutions delivery of a discharge pump are arranged at the position which does not lap in the vertical projection of a discharge pump axial center direction and are made open for free passage in the invention of claim 2 in a free passage liquid route, The discharge pressure of a discharge pump acts from the liquid route 33 of a direct hair dying comb object to the delivery 37, and does so the effect that the action from which discharge quantity changes in pulsation can be made to ease in the free passage liquid route 28.

[0042]To a discharge pump axial center, the liquids-and-solutions input of a hair dying comb object can make it deflect to radial outside, therefore a hair dying comb object in the position near 1 side of the accommodation cylinder of hair dying liquids and solutions. since it can allocate with the upright posture, the effect as for which a hair dying comb object can go away

and which can carry out hair dying uniformly using the whole is done so, and the effect that the poor hair dying of the comb of base slippage of a hair dying comb object in case a hair dying comb object inclines and is allocated to 1 side of said accommodation cylinder can be prevented is done so.

[0043] Since the center-to-center dimension of the comb which the ratio of the breadth W of each comb and thickness T is made about into 1:0.2 to 0.3, and adjoins in the invention of claim 3 is made into about 1.5 to 2 times of thickness T, Although a hair dying comb object is fabricated by the molding means by a synthetic resin, If sufficient center-to-center dimension of the comb which carries out liking \*\* and can reveal a function and which liking \*\* is carried out, structure can be realized, and the ratio of the breadth W and thickness T is below said minimum, and adjoins becomes below in said minimum, When shaping of the hair dying comb object which carries out liking \*\* and has a function becomes difficult and it becomes beyond a maximum of each of said numerical value, it becomes large-sized, and a comb carries out liking \*\* and it becomes impossible to reveal a function. Liking \*\* of the breadth of each comb, thickness, and the center-to-center dimension is carried out, and they are suitably chosen into the manifestation of a function, and correlation with the range which can be synthetic resin fabricated.

[0044] In the invention of claim 4, in connection with both inventions of claim 2 and claim 3. Into the tip part slippage portion of the side in which each comb currently installed successively by the hair dying comb object has countered mutually. Since the opening of the delivery of hair dying liquids and solutions is carried out, hair dying liquids and solutions can be made to adhere to the hair near the scalp in the \*\*\*\*\* [ every ] \*\* case, The effect of a comb passing the hair along between the hairs by \*\*\*\* or the moreover comparatively narrow interval which becomes empty, decreasing the operation frequency of the hair dying implement for making hair dying liquids and solutions adhering to the hair uniformly, raising hair dying efficiency, and getting is done so.

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[Translation done.]

**\* NOTICES \***

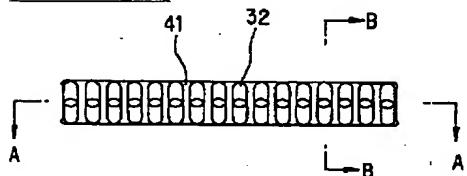
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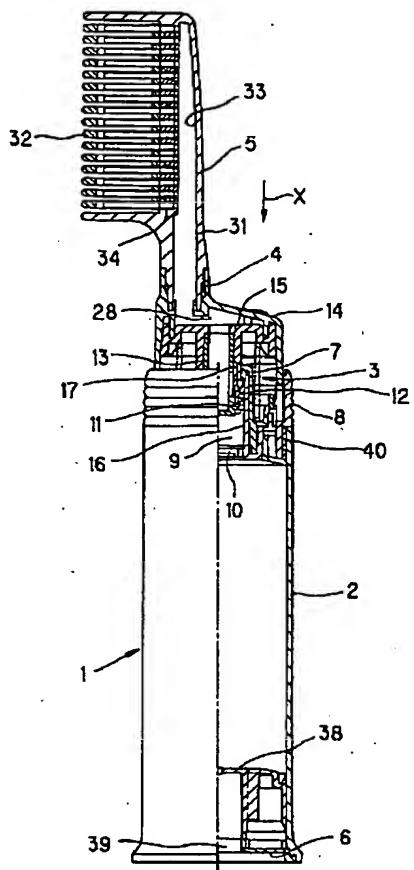
1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. \*\*\*\* shows the word which can not be translated.
3. In the drawings, any words are not translated.

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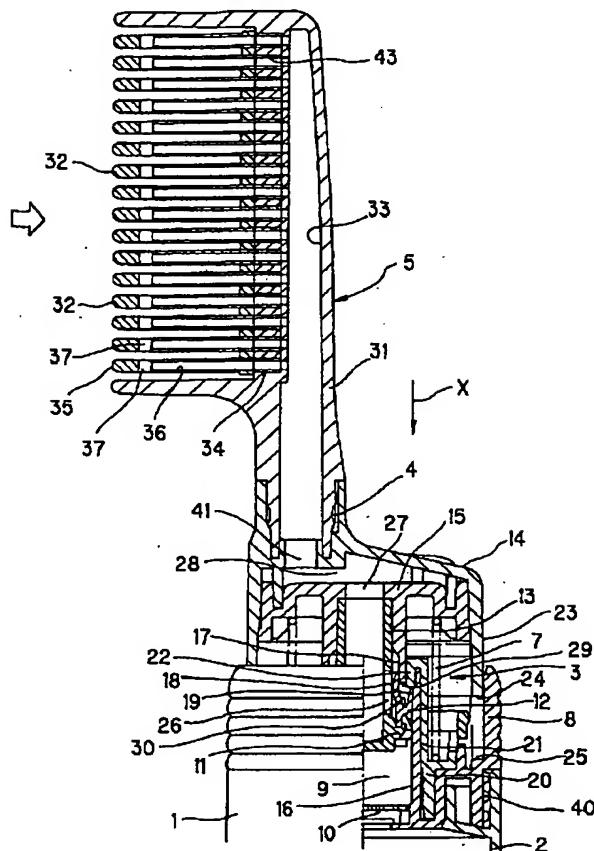
**DRAWINGS**

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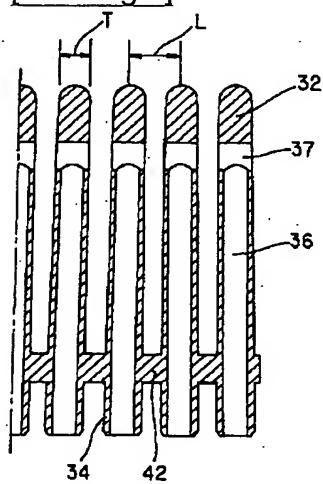
**[Drawing 3]****[Drawing 1]**



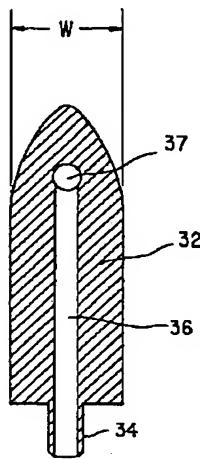
[Drawing 2]



[Drawing 4]



[Drawing 5]



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[Translation done.]